```
-1075  ATTAGAGATT GTAAATTGGG CTCTGAGCTT CCTACCAACA AAAGCACAAA GGAAAATATG

-1015  ATCACTGGTA TTAAAAAAAA ACACCTATGG TTTCCAAAAG ATTAAAACAA ACCAGCAGTT

-955   TTATAGAAGC TAACACTAAA ATCTAAAGGA ACTACGTTCT ATGGAGCCAC TTAATATGGA

-895   TAAACACTTT GACAATATTC TTTCAACAAC TACAGTAACA AGTTTCTTAG AGTCCATTTC

-835   TTTTTACATC CATAATGAAT TGTAAATCTT TTCTACTTCT TAAGTAAAAC ATCACCACTT

-775   AATTCTGGTA ACTTTTCCAT ATTAACTTTT TAGAACAATT GCAAACGTAC CATAAATGAT

-715   TGTTGTCACA GTGGTAACTA TTTGACCCTG ACTGTTATTT TGTATATAGC AGCTTTTAAA

-655   ATAAAAAGGC AACAAGTTTC TAGGCGTAAT TTCCACAGAT CTTTTATGTA AAACAATGAC

-595   ATCCTTTGCA ACTTCTGCCA TTTAATCTAT CTCAAGCAAG CTCTCTGGAA ACAAATCTAT

-535   TTGAAAGATT CTATTGTAAT TAGAAATCAG GGTAACTGAA TGCACTAGAT GAAAACCTTC

-475   TGACTGGGGC CAATGAAGTC AATAAAGTCA AAACTGCTGT GAATGCTCAA CTGTCTGCAG

-415   ATCAGATGTC TTGGGATGGA ATCCGTTCTC GAGGCCACCA TCATTAATAT CAATTTGGCC

-355   ATGTAATACA AGCCTCACTT GTTCCACTGT TACAAATGTG CTTAAAACTG AGCTCATTTA

-295   CAATCCAAAT ACATATGTAG GATGGTAACC AAGGCATCAC ACTAATTTAG GTATTATGTT
                              ------------------------>
                                    FP1                      FP2
-235   TTAGGGGGAA CAAAAGG TAT GTTAATATTT TATTCA TC TC CAAATTAACT ATAAATTGT G

                                         FP3
-175   CATTCTTGCA TAGATCCTCC TTGGGAA TGA GAAATTAGGA AAATCCA GTT GTTAAAATGA

                                                            FP4
-115   ATGCCTAAAA TCAAAATAAA ATTTGTTTTT CTGGCACCTG CTTGATGACA CAGACTAATA
                                                 ------------------------
                                                          +1
-55    ACCAATGA CA AAATTCCCTT GAACCCAAGT TTTCATTTCC TCCTATTGTG TGGTCAGGTT
       ------>
```

Fig. 1-1

```
+6     ATGTAAGGGT TTGCTTTCAC CCCATTCAAA AGGTACCTCT TCCTCTTCTC TTGCTCCCTC
                                                                    ----------

                                                              FP5
+66    TCGCCCTCAT TCTTGTGCCT ATGCAGACAT TTGAGTAGAG GCGAATCACT TTCACTTCTG
       ------------>        -------------------->

                                                          FP6
+126   CTGGGGAAAT TGCAACACGC TTCTTTAAAT GGCAGAGAGA AGGAGAAAAC TTAGATCTTC
       -------------------->

                                 SD1 ↓
+186   TGATACCAAA TCACTGGACC TTAGAAGGTC AGAAATCTTT CAAGCCCTGC AGGACCGTAA
                                                   ---------------------->

+246   AATGCGCATG TGTCCAACGG AAGCACTGGG GCATGAGTGG GGAAGGAATA GAAACAGAAA

           SD2 ↓
+306   GAGGGTAAGA GAAGAAAAAA GGGAAAGTGG TGAAGGCAGG GAGGAAAATT GCTTAGTGTG

+366   AATATGCACG CATTCATTTA GTTTTCAAAT CCTTGTTGAG CATGATAAAA TTCCCAGCAT

+426   CAGACCTCAC ATGTTGGTTT CCATTAGGAT CTGCCTGGGG GAATATCTGC TGAATCAGTG
                                       ---------------------->

+486   GCTCTGAGCT GAACTAGGAA ATTCACCATA ATTAGGAGAG TCACTGTATT TCTCTCCAAA

+546   AAAAAAAAAG TTATACCCGA GAGACAGGAT CTTCTGATCT GAAATTTTCT TCACTTCTGA

+606   AATTCTCTGG TTTGTGCTCA TCGTTGGTAG CTATTTGTTC ATCAAGAGTT GTGTAGCTGG

+666   CTTCTTCTGA AAAAAGGAAT CTGCGTCATA TCTAAGTCAG ATTTCATTCT GGTGCTCTCA

+726   GAGCAGTTAG CCCAGGAAAG GGGCCAGCTT CTGTGACGAC TGCTGCAGAG GCAGGTGCAG

+786   TTTGTGTGCC ACAGATATTA ACTTTGATAA GCACTTAATG AGTGCCTTCT CTGTGCGAGA

+846   ATGGGGAGGA ACAAAATGCA GCTCCTACCC TCCTCGGGCT TTAGTTGTAC CTTAATAACA

+906   GGAATTTTCA TCTGCCTGGC TCCTTTCCTC AAAGAACAAA GAAGACTTTG CTTCATTAAA
                                                             ------------

           SD3 ↓
+966   GTGTCTGAGA AGGAAG
       ------------------>
```

FIG. 1-2

```
-ATTAGAGAT----TGTAAATTGGGCTCTGAGCTTCCTA-CCAACAAAAGCACAAAGGAA
 :  :  ::::    :::  ::  :::  ::::  : :::  :::  :::  :::     ::  :::    :
CACTGGAGAGAATCTGTTAACTGGCCTCTCATCTTTCTATCCAGCAAGCACAGAAAAACA


AATATGATCACTGGTATTAAAAAAAAACACCTATGGTTTCCAAAAGATTAAAACAAACCA
::  :::::   ::::: ::           ::     :::    ::::  : :::   ::  :: :::
AAAATGACTACTGCTA---------AAAGTCTA--CTTTCTAGAA-ACCAACACGGAACA


GCAGTTTTATAGAAGCTAACACTAAAATCTAAAGGAACTACGTTCTATGGAGCCACTTAA
   :::::    ::  :  ::::::  ::::  :::::::  :  :   ::::    :::::  :  :
----TTTTAG-GATGTTAACATTAAAGTCTAAAAAGTTCTGTTCAGCAGAGCCTCATGA


TATGGATAAACACTTTGACAATATTCTTTCAACAACTACAGTAACAAGTTTCTTAGAGTC
:::::   ::  :::::::  :::::  ::: :::  :::  :  ::  :   :::::::  ::::
TATGGGCAAGGACTTTGCCAATAATCTGTCAGCAAACATAGCATCTGCTTTCTTAAAGTC


CATTTCTTTT-TACATCCATAATGAATTGTAAATCTTTTCTACTTCTTAAGTAAAACATC
     ::::  :  :  :  :::       :  :  ::  ::  :  :  ::::  :::  ::  :  :::
ACACTCTTCTGTTCTTCC----TAACTTGCAAGTAATCTCCATTTCTCAAGCAACA-ATC


ACCACTTAATTCTGGTAACTTTTC----CATATTAA-CTTTTTAGAACAATTGCAAACGT
  ::::::  ::  :::  ::::  :::       ::::  :::  ::  ::  :  ::::  :::::  :  ::
CCCACTTGATCCTGATAACCTTTTATTTCATAGTAAACTCTTGAAAACAGTTGCACATGT


ACCATAAA-TGATTGTTGTCACAGTGGTAACTATTTGACCCTGACTGTTATTTTGTATAT
::::  :::  ::::      :::  :::       :::  ::       :::::::  :  :  ::::  :::::  :
ACCAGAAAATGATGCTTGACACCATGGAAATGATTTGACACAG-CAGTTACTTTGTCTCC


AGCAGCTTTTAAAATAAAAAGGCAACAAGTTTCTAGGCGTAATTTCCACAGATCTTTTAT
:  :::  :                     :::    :::::::        :  ::  :::  :::       :::::
ACCAGTT-----------------ACACCTTTCTATAG--AGTTCCCATAGAGGCTTTAT


GTAAAACAATGACATCCTTTGC---------------AACT--TCTGCCATTTAATCTA
:::::  ::  ::      :   :::                        :::     :::  ::::::::::::
GTAAAGCACTGGGGTGTTTTTGTTTGTTTGTTTGTTTTAACAGCTCTACCATTTAATCAG


TCTCAAGCAAGCTCTCTGGAAACAAATCTATTTGAAAGATTCTATTGTAATTAGAAATCA
 ::   ::  :  :  :::    :::::  :  :::::  ::::  :::::::: ::      :::::::  :  :
CCTAGAGAATGATCT--AGAAACCAGTCTATCTGAAGGATTCTACTGAGTTTAGAATTTA


GGGTAACTGAATGCACTAGATGAAAACCTTCTGACTGGGGCCAATGAAGTCAATA-----
 :      :::::  :  :  :::     :  ::::::::::  ::::  ::       :::::  :::  :
GTATAACAGGAGAGAGTGGGTGAGACCCTTCTGA-TGGGCCC--TGAAGCCAAGAGCATT
```

Fig. 2-1

```
------------------------AAGTCAAAA---------CTGCTGTGAATGCTCAACTGTCT
                        ::: ::: :         : ::: ::: ::: :::       :
GGCTCAGCTCTGAGTGCCCAAGCCAAGAGCATTGGCTCAGCTCTGAGTGCCCAAGCCATT

GCAGATCAGATGTCTTGGGATGGAATCCGTTCTCGAGGCCACCATCATTAATATCAATTT
::: : : : :: :::: :::: :    :::: ::::::   : :  ::    :::
GCACA-CTGCTGTGTTGGCATGG---CGTTTCTGCAGGCCATTGGTACTCTTACTGTTTT

GGCCATGTAATACAAGCCTCACTTGTTCCACTGTTACAAATGTGCTTAAAACTGAGCTCA
:::::::::::: ::    :::::::  ::: :::::: :::   ::::::::::: ::   ::
GGCCATGTAATTCATCGCTCACTA-TTCAACTGTGACAGGTGTGCTTAAAAC-GA---CA

TTTACAATCCAAATACATATGTAGGATGGTAACCAAGGCATCACACTAATTTAGGTATTA
:  :  : ::: :      :::::  :::: : :     :::::  :: :    :::
TAC-CTGTTCACAGCC-TAT-----ATGGTGACCAGGACCCTGAACTAACTTGGACCTTA

TGTTTTAGGGGGAACAAAAGGTATGTTAATATTTTATTCATCTCCAAATT---AACTATA
:::   ::   :  ::::::::: ::       :::::::::: :: :: : :::::::   :: : ::
TGT--CAGAAGCAACAAAAGACATACCAATATTTTCTTGATTTTCAAATTGGTAAGT-TA

AATTGTGCATTCTTGCATAGATCCTCCTTGGGAATGAGAAATTAGGAAAATCCAGTTGTT
::::::: :  :::::: :::::: ::: :  ::       :::: :::::     ::::::      :
AATTGTCTACCCTTGCGTAGATTCTCTTCAGGC-----AAATGAGGAAGTGCCAGT---T

AAAATGAATGCCTAAAATCAAAATAAAATTTGTTTTTCTGGCACCTGCTTGATGACACAG
:::     : ::  :::::::::::::: ::::  ::          :::::::::::::: ::::::    :
AAAGGTAGTGTGTAAAATCAAAACAAAAATTAAA---CTGGCACCTGCGTGATGAACAAA

ACTAATAACCAATGACAAAATTCCCTTGAACCCAAGTTTTCATTTCCTCCTAT-------
: : :::: :::::  : :: :  :: :::  ::  :::::::::::::: : ::
AATTATAATCAATGGTACAACTGTCT-GAAGTCA--TTTTCATTTCCTTCCATGAAGTGG

-------TGTGTGGTC
       :::: :: :
GCAGAGTTGTG-GGGC
```

Fig. 2-2

```
AGGTTATGTAAGGGTTTGCTTT----------------CACCCCATTCAAAAGGTACCT
  :  :  :            ::              :  ::::: :    :  ::   ::
TAACTCTCTTCTCTCCTCCCTTTCCCTCTCGGTCCTCCCCCCCCCAACCCCCATGTCTCT


CTTCCTCT-TCTCTTGCTCCCTCTCGCCCTCATTCT-------TGT--------------
::  ::::  :::::   :::  ::::: :  :::   :::           :::
CTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTCTGTTTTGGTTCCTTCTT


-----------GCCTATGCAGACATTTGAGTAGAGGCGAATCACTTTCACTTCTGCTGG
            ::::   :::::  :  :::   :   :::::: :::::::::::::::
GCTCTTTTAGGGCCTGCACAGACCCACGGGTAGCCACTGATCACTCTCACTTCTGCTGA


GGAAATTGCAACACGCTTCTTTAAATGGCAGAGAGAAGGAGAAAACTTAGATCTTCTGAT
:::::::  ::  :: ::::::: :::::::  ::   ::: ::::::::::  ::::  :::::::::
GGAAATGACAGCATGCTTCTCTAAATGGTGGAACGAAAGAGAAAAC--AGATGTTCTGAT


ACCAAATCACTGGACCTTAGAAGGTCAGAAATCTT-TCAAGCCCTGCAGGACCGTAAAAT
:::::::::      ::: :: :: ::: :: : :: ::: : :: : :::::: :: :::
ACCAAATGGTCAGACTTTGGAGGGTTAGCAGTATTCTCAGGACCAGTAGGACC-TAGAAT


GCGCATGTGTCCAACGGAAGCACTGGGGCATGAGTGGGGAAGGAATAGAAACAGAAAGAG
      ::  :::    :  :  :::::::::::  : :  :::::   :  :    ::::    ::
AT--CTGAGTCTGAAG--AGCACTGGGGAGTCACTGGGGGGTGGGT-----CAGA---AG


GGTAAGAGAAGAAAAAAGGGAAAGTGGTGAAGGCAGGGAGGAAAATTGCTTAGTGTGAAT
  :::::  ::::::::::  ::::      :::         :::  :::      :   ::   ::::  :  :
ACTAAGACAAGAAAAA-GGGA----GGT-------GGGCGGA---TGTCTGTGTGTTA-T


ATGCACGCATTCATTTAGTTTTCAAATCCTTGTTGAGCATGATAAAATTCCCAGCATCAG
  ::: :          : :   ::::  :  :  :  :::::::  ::  ::    :  :  :
CTGCTC--------------TGCTGATCCCTCTCGTGCATGATGCAACACCTGACTTTAA


ACCTCACATGTTGGTTTCCATTAGGATCTGCCTGGGGGAATATCTGCTGAATCAGTGGCT
::::          ::::::::: ::: ::  :::: :: :::::  :::::::::::::::::::  ::
CCCTCTTGCTATGGTTTCTATTTGGGTCTGACTTGGGGACTATCTGCTGAATCAGTATCT
```

Fig. 3-1

```
CTGAGCTGAACTAGGAAATTCACCATAATTAGGAGAGTCACTGTATT--------TCTCT
:::::: :::: : :::::::::::  :  ::  :::::::::::::::     :::::
CTGAGCAGAACCAAGAAATTCACCCCCAA-AGAGGAGTCACTGTATTAGTCAGGGTCTCT


CCAAAAAAAAAAAAGTTATACCCGAGAGACAGGATCTTCTGATCTGAAATTTTCTTCACT
        ::  ::::::::: :::: ::: :::: ::: :::: :::::::::: ::: :
G-------AACAAAGTTAGACCCAAGAAACAGAATCCTCTGGTCTGAAATGGTCT-CTTG


TCTGAAATTCTCTGGTTTGTGCTCATCGTT----------GGTAGCTATTTGTTCATCA
:  :::::::::::::: :::::: : ::  :           :::::        :: :: :::
TGTGAAATTCTCTGCTTTGTACGCAAAGGAAAGAACATGCCGGTAGGAGCCTGCTCGTCA


A--GAGTTGTGTAGCTGGCTTCTTCTGAAAAAAGGAATCTGCGTCATATCTAAGTCAGAT
:  ::: :::: : :: :::::::::  :::::: :  :::::::::: ::: ::: :::::
AACGAGGTGTGAATCTAGCTTCTTCTAGAAAAAGCAGCCTGCGTCACATCGAAGCCAGAT


TTCATTCTGGTGCTCTCAGAGCAGTTAGCCCAGGAAAGGGGCCAGCTTCTGTGACGACTG
::  ::::  :::::::: ::::: ::::: : ::    :::: :  ::::: ::::: ::::
TTGGTTCTT-TGCTCTGAGAGCGGTTAGGCTAGTGGAGGG-CAGGCTTCCGTGACAACTG


CTGCAGAGGCAGGTGCAGTTTGTGTGCCACAGATATTAACTTTGATAAGCACTTAATGAG
 : ::: : ::::::::::: :: :: :::::::::::: :::: :::::::     :  :::::
GTACAGGGACAGGTGCAGTGTGGGTCCCACAGATATGAACTCTGATAAATCGTGCATGAG


TGCCTTCTCTGTGCGAGAATGGGGAGGAACAAAATGCAGCTCCTACCCTCCTCGGGCTTT
   ::  ::::::  :  :::::::::  :: ::      :   ::::::::  :::::::::  ::: :
---CTACTCTGCGTAAGAATGGAGAAGAGAGCAGCCCAGCTCCCACCCTCCTGGGGTTCC


AGTTGTACCTTAATAACAGGAATTTTCATCTGCCTGGCTCCTTTCCTCAAAGAACAAAGA
 : : : : : ::             ::::::: : :: :  ::  : : ::: :
CATCGCAGCCTGAT-----------CATCTGCA-GCCTTC--TCAGCCAGGAAGATGTT


--AGACTTTGCTTCATTAAAGTGTCTGAGAAGGAAG
 :::      :::::::: ::: ::::::::: : ::::::
TCAGATCCTGCTTCGTTAGAGTGTCTG-GGAGGAAG
```
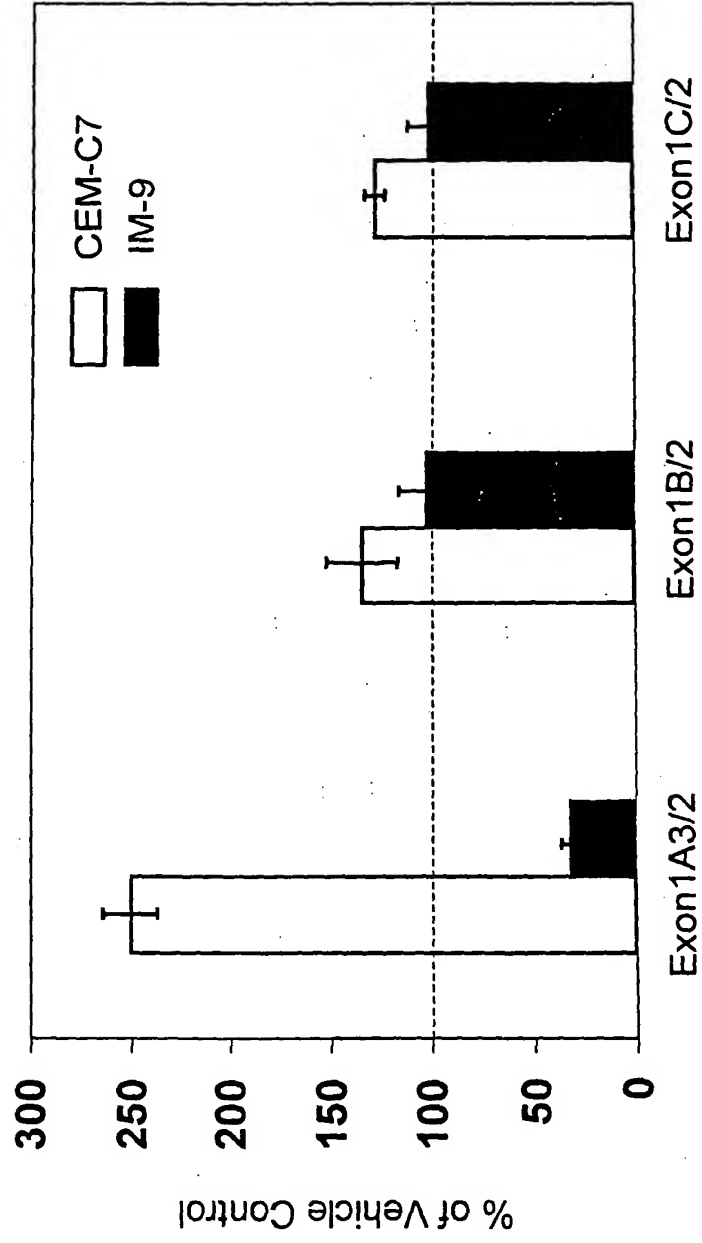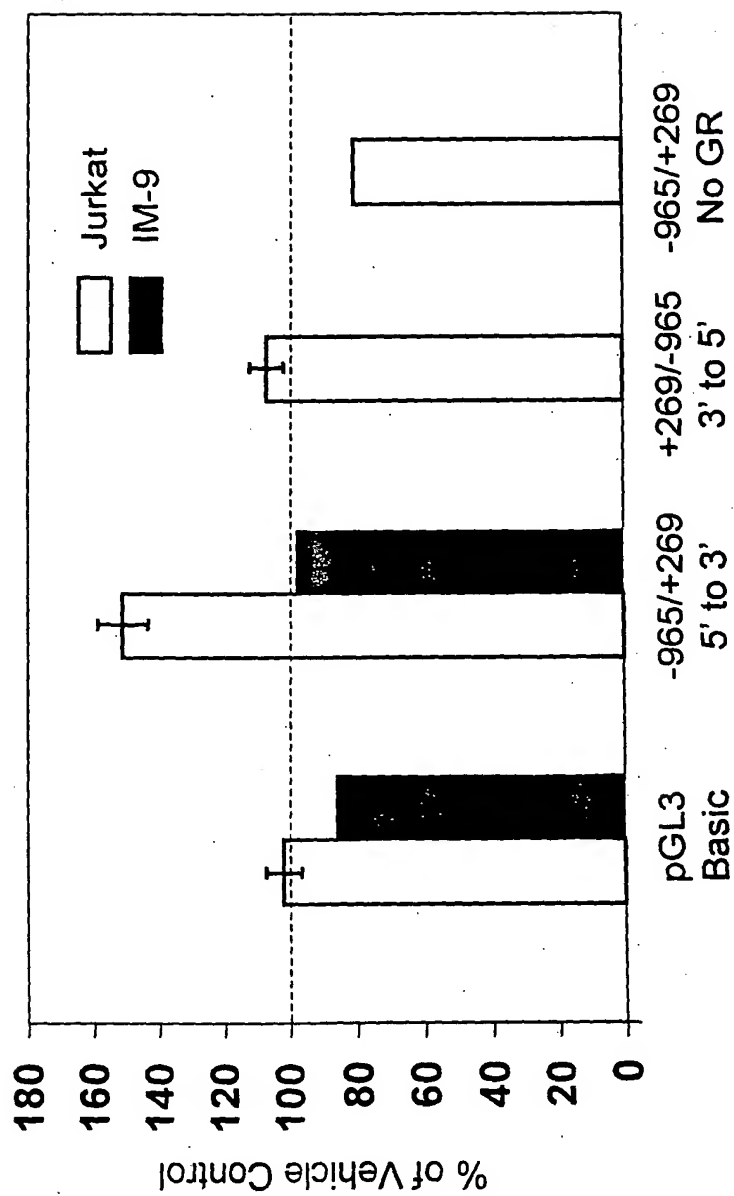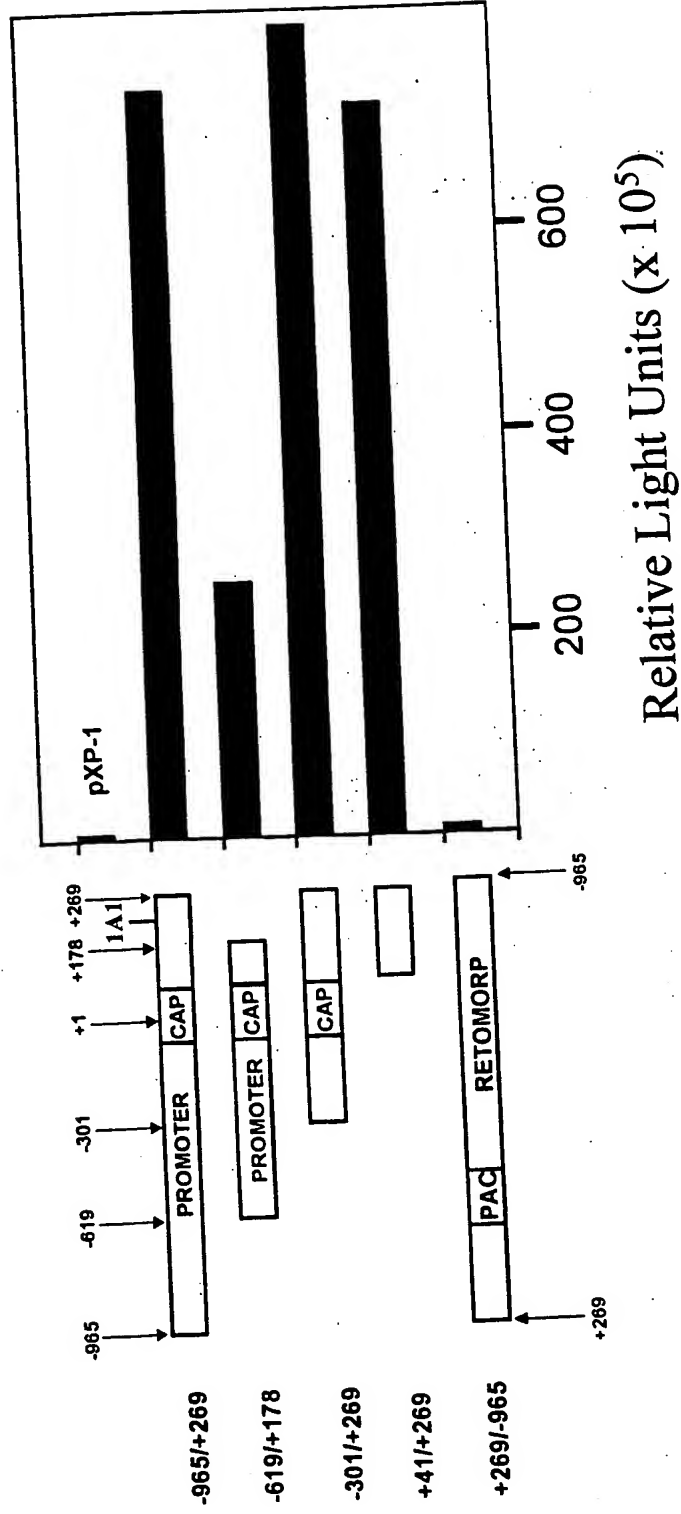
Fig. 3-2
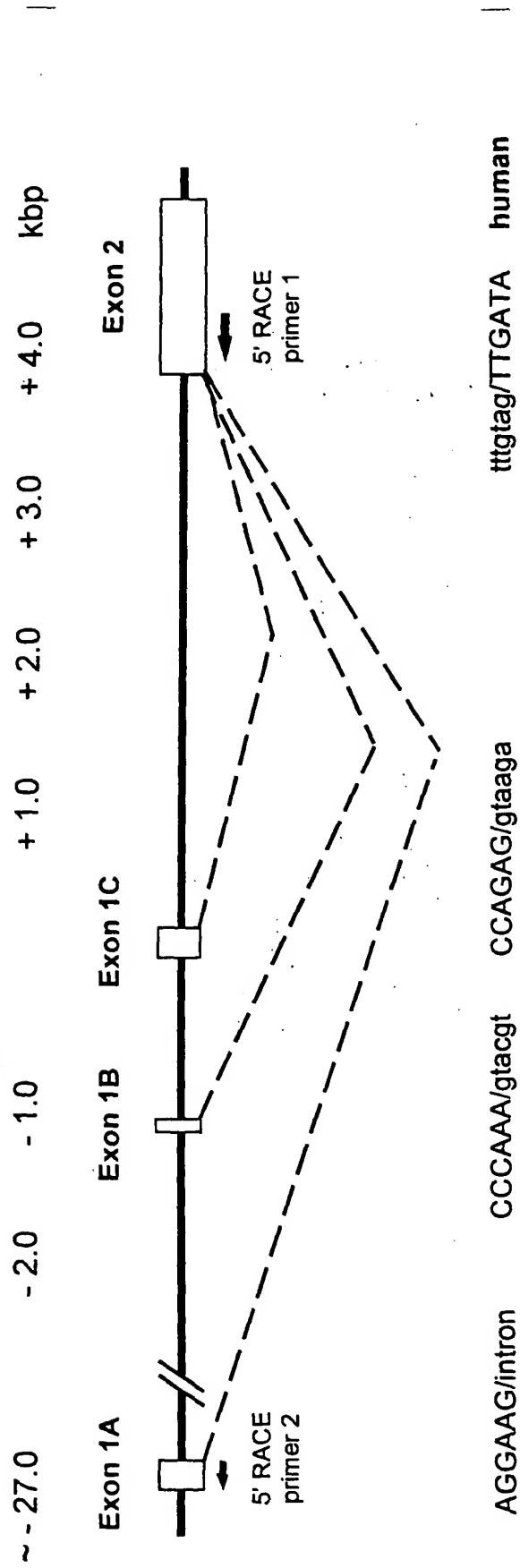
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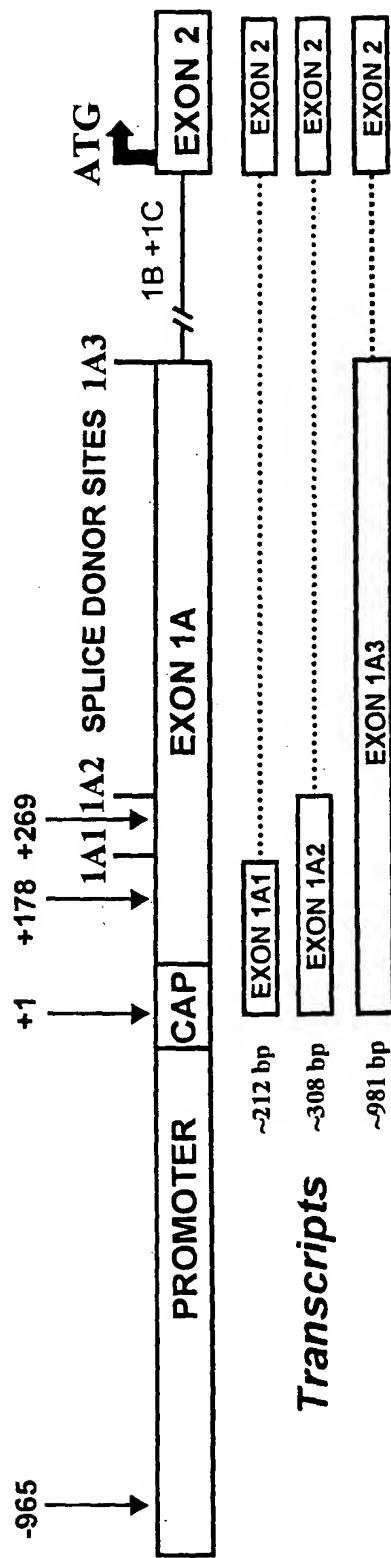
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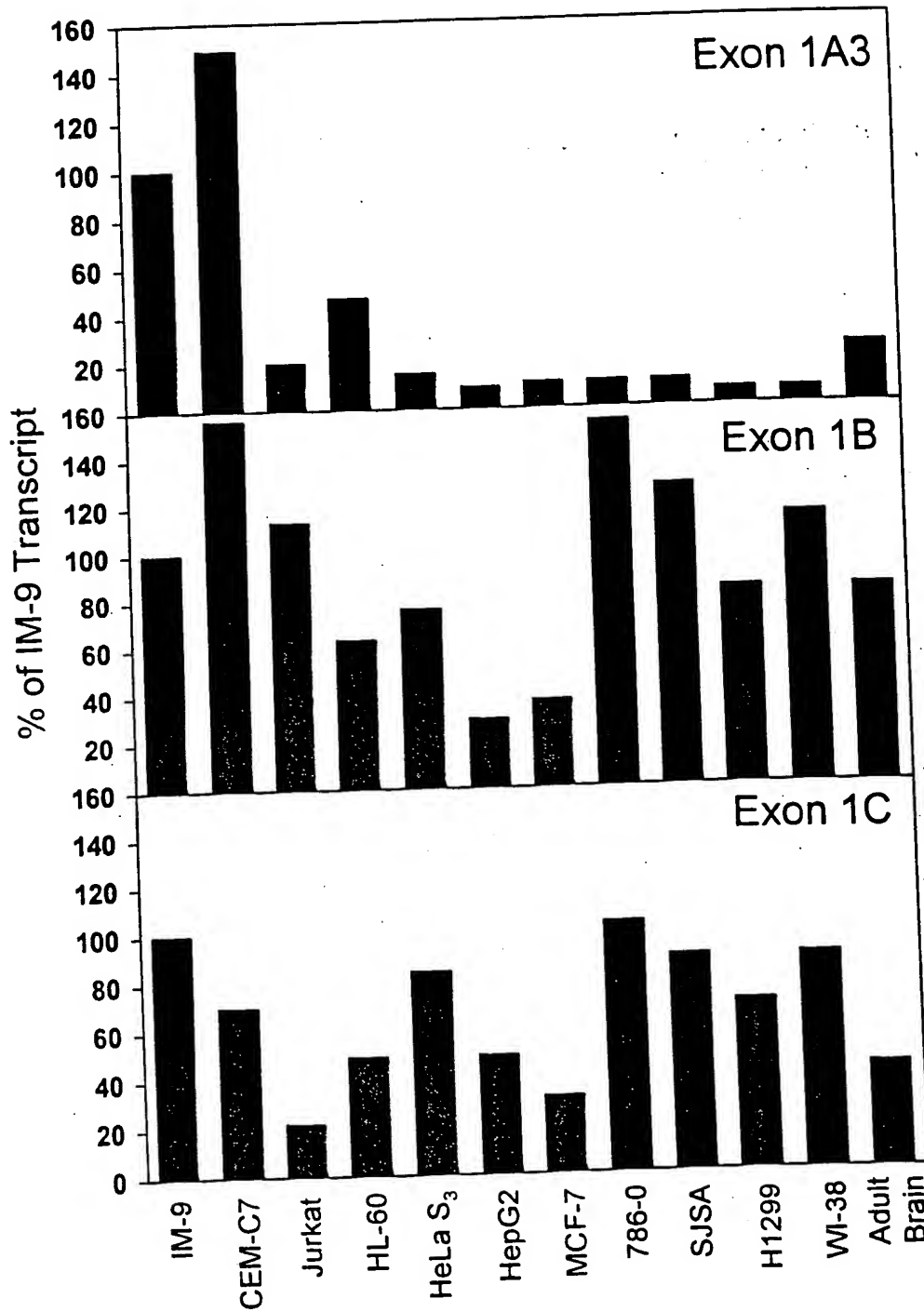
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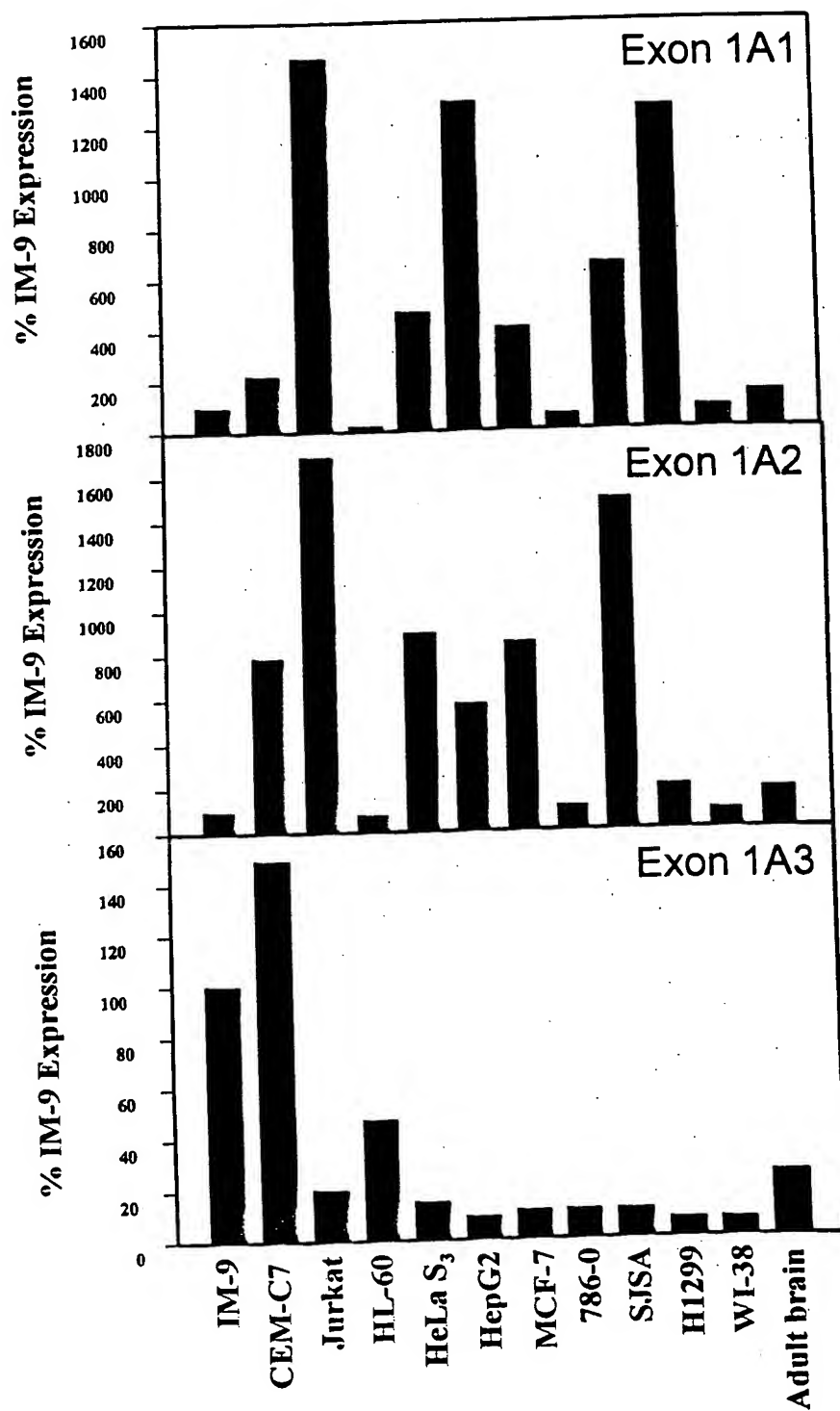
Fig. 7

Fig. 8

Fig. 9

Fig. 10

Fig. 11

Fig. 12